

Claims

- [c1] A process for producing a plastic laminate article, the process comprising the steps of:
providing a mold with a mold cavity;
positioning a laminate material in said mold cavity;
closing the mold to a predetermined gap;
injecting plastic material into the mold cavity and onto the laminate material;
injecting a gas material into the plastic material in the mold cavity;
closing the mold;
venting the gas from the plastic material; and
opening the mold and removing the completed laminate article from the mold cavity.
- [c2] The process as described in claim 1 wherein the mold has a moveable mold member and a stationary mold member, and wherein said laminate material is positioned in said moveable mold member.
- [c3] The process as described in claim 1 wherein said mold cavity has shear edges around its perimeter.
- [c4] The process as described in claim 1 wherein said lami-

nate material is larger than said mold cavity.

- [c5] The process as described in claim 1 wherein the quantity of plastic material which is injected into said mold cavity is sufficient to fill said cavity.
- [c6] The process as described in claim 1 wherein said mold is closed under controlled conditions for speed and pressure.
- [c7] The process as described in claim 1 wherein the closing of the mold compresses the gas which is injected into said plastic material.
- [c8] The process as described in claim 1 wherein the plastic material is injected into said mold cavity substantially at the center of said mold cavity.
- [c9] The process as described in claim 1 wherein said gas is injected into the plastic material at more than one location in said mold cavity.
- [c10] The process as described in claim 1 wherein said injected gas forms one hollow void in said plastic material.
- [c11] The process as described in claim 1 wherein said injected gas forms at least two hollow voids in said plastic material.

[c12] The process as described in claim 1 further comprising the step of trimming the edge of the produced article after it has been removed from the mold.

[c13] A method of producing a plastic article with a laminate material fixedly secured to it, said process comprising the steps of:

positioning a laminate material in a mold cavity;

injecting plastic material into said mold cavity and onto said laminate material;

injecting a gas into said plastic material in said mold cavity to form at least one hollow void in said plastic material;

allowing said plastic material to solidify forming a plastic laminate article;

venting said gas from said plastic laminate article; and removing said plastic laminate article from said mold cavity.

[c14] The method as described in claim 13 further comprising the step of compressing said gas material in said plastic article.